# REMARKS

ON THE TREATMENT OF

# SMALL-POX & ELEPHANTIASIS.

BY

HON. P. D. ANTHONISZ, M.D.

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# REMARKS

## ON THE TREATMENT OF

# SMALL-POX AND ELEPHANTIASIS.

WHEN small pox appeared in Galle, and afterwards at the village Ahangama, spreading so extensively that the Courts had to be closed in order to prevent the villagers from coming into town, I issued the following notice to the public regarding small pox:—

1.—Give every assistance to the Medical Officer and Vaccinator on duty to vaccinate and re vaccinate the inmates of houses where small-pox has appeared.

2.—Allow and assist the Medical Officer to isolate cases of small-pox in private houses, or to remove them to Hospital.

3.—Permit and assist in the disinfecting of the houses, clothing, &c., of small pox patients, when done under medical supervision or by properly appointed persons.

4.—Do not allow curious persons or visitors to visit the houses of small pox patients, though they have already

had the disease, and are not likely to take it again. This is one great source of spreading the contagion in villages and crowded localities.

5.—The vaccination should be from arm to arm, the lymph being taken from healthy subjects, the offspring of healthy parents. If animal or calf lymph is to be had, this should be preferred.

6.—It being the practice for natives to carry copper and other coins in their waist almost next to the skin, in case of any coins being found in the possession of a small-pox patient they should be washed in boiling water, disinfected, and cleaned before they are circulated.

7.—It has been found that if a person affected with small-pox be carefully vaccinated every 2nd day after the appearance of the eruption, the disease subsides on the 8th day, and that the vesicles do not become pustulous, or turn into matter, but dry and scab, leaving little or no marks, and an entire absence of pitting of the skin.

In severe cases the vaccination has to be done daily, and in mild cases every 2nd day; so that a mild case will require four vaccinations, and a severe one eight. This must be left to the judgment of the medical attendant according to the progress of the disease.

8.—The popular opinion that vaccination is hurtful when small-pox exists, and that it leads to an attack of small-pox, is entirely erroneous.

9.—The opinion of the profession some time ago was that unless a person was vaccinated within three days after being exposed to the contagion of small-pox, the

vaccination will not take effect, and that the person thus vaccinated will have small-pox.

This theory has also been found to be erroneous. In an instance where a large number of persons was exposed to the contagion of small pox, and all vaccinated and re-vaccinated, most of them taking the vaccination, nearly two hundred persons took ill of small pox, but the disease was in so mild a form that none of them was confined to bed, and all recovered without any of the after consequences of the disease.

10.—In villages where small pox exists a well should be kept entirely for the use of the patients, and the water should not be allowed to flow out into gardens, &c., but a hole should be dug at some convenient distance from the well, and the bath water allowed to flow into it, and be disinfected with carbolic acid. The path to the well should not be used by the villagers; a notice to that effect being posted up.

11.—It is very necessary that when persons who have been living in infected houses, or in the neighbourhood of infected houses, or have been in communication with small-pox patients either directly or otherwise, are affected with fever, notice of the fact should at once be given to the medical authorities.

P. D. Anthonisz, M.D.

Galle, 1st August 1887.

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M. Pasteur's success in the treatment of hydrophobia by inoculation with the attenuated virus of Rabies first suggested to my mind a like treatment of small pox by vaccination. The analogy between the two cases appeared

to me striking, and the results obtained by vaccinating persons after exposure to the contagion of small-pox, and during the period the poison was in a state of incubation in the system, only strengthened the idea in my mind that vaccination carried out according to M. Pasteur's method might prove an efficient curative agent.

Some years ago an outbreak of small-pox occurred in a crowded village in the Galle district.

From ignorance on the part of the inhabitants who believed that the first case which appeared was not small-pox but chicken-pox, a large number of persons became exposed to the contagion. I had all of them vaccinated and re-vaccinated without distinction, in many cases long after exposure to the contagion, some not taking the vaccination and others taking it successfully. The result was in the highest degree satisfactory. Though a large number took ill of small-pox not a single death occurred. The disease appeared in every case in so mild a form that the largest number of patients were not even confined to their rooms. This pointed to the fact that vaccination had more than a prophylactic effect, that it modified the disease even after it had taken possession of the system. The next step was obvious enough. If vaccination was so eminently efficacious in modifying the disease even after the poison had been operating on the system for some days, though its outward development had not been reached, would it not have a beneficial effect if employed after its development? Reflection on the effects produced by M. Pasteur's treatment led me to say it would. This view received strength by what I now and again gathered from the medical journal as to the speculations of some medical writers regarding the efficacy of vaccination at

any stage of the disease. My theory was that a treatment analogous to that adopted by M. Pasteur in hydrophobia might with advantage be used in small-pox, that small-pox patients, if vaccinated daily, or more or less frequently, would benefit by such treatment.

It only wanted opportunity to put this theory to the test of actual experiment. Such an opportunity presented itself at the late outbreak of small-pox at Galle. Mr. Thomasz, a Licentiate of Medicine and Surgery, and a member of the Civil Medical Department, who has charge of the Small-pox Hospital here, cordially aided me, and I am indebted to my young friend for carrying out my suggestions with care and judgment, and for noting the results in each case accurately. These results have far exceeded my expectations.

The *modus operandi* was this: every mild case was vaccinated every other day: every severe case, daily or oftener, if it was thought necessary, and this was carried on until the disease subsided or the patient fell a victim to it. The lymph used was the ordinary vaccination lymph. The results were these: except those who died within one, two, or three days, or so after admission into hospital with the worst form of the disease, the rest, on the eighth day, and some on the twelfth day needed no further vaccination, as the vesicles all collapsed and dried up without becoming pustulous. The scabs when they fell off left very superficial marks with very slight, if any, pitting. The mortality has also (I am informed) been less, and the patients escaped all the consequences which attend suppuration, *e. g.* secondary fever, &c. A subsidiary advantage was that the air of the ward became far less disagreeable to the patient,

the nurses, and the medical attendant in charge.

Mr. Thomasz has kindly supplied me with the following figures. The vaccination of small-pox cases was carried on between the 12th of May and 4th September of the current year.

| | |
|---|---|
| No. of cases vaccinated ... ... | 59 |
| I.—No. of those that had no marks of vaccination or that had never been vaccinated ... .. ... | 35 |
| II.—No. that had good marks of vaccination | 14 |
| III.—No. that had unsatisfactory marks of vaccination ... ... ... | 10 |

Of the 35 on whom there was no evidence of previous vaccination, eleven deaths occurred. One dying fifteen days after admission, eight between the sixth and seventh days, and one on the fourth day. The cause of death in these cases was obstruction to respiration from inflammation and swelling of the larynx. Two cases were treated during the febrile stage of the disease before the vesicles appeared. One of these died of diarrhœa after recovering from small-pox, thirty-eight days after admission.

Of the second class, those that had good marks of vaccination, three deaths occurred: one from exhaustion, twenty-seven days after admission; one from inflammation and swelling of the larynx, causing obstruction to respiration, nine days after admission; and one from a cause not accurately ascertained.

Of the ten that had unsatisfactory marks of vaccination, three deaths occurred: one from obstruction to respiration caused by inflammation and swelling of the larynx, one from suppression of eruption (vaccinated only once during

the eruptive stage of the disease), one from dropsy, forty-three days after admission.

There were, it will thus appear, seventeen deaths in 59* cases; the proximate causes of death being as follows:—

| | |
|---|---|
| Inflammation and swelling of the larynx causing suffocation ... ... ... .. .. | 12 |
| Diarrhœa ... ... ... ... | 1 |
| Exhaustion ... ... ... . | 1 |
| Suppression of eruption ... ... . | 1 |
| Dropsy ... ... . ... | 1 |
| Cause unknown ... ... .. ... | 1 |
| | 17 |

Could not the large number of deaths from suffocation, the effect of inflammation and swelling of the larynx, have been avoided by opening the Trachea in time when urgent symptoms were setting in? and excepting the death from suppression of eruption could the other causes of death be attributed directly to poison of small pox?

Feeling that the practice of vaccination would commend itself to the general public, even to the prejudiced and ignorant, when a knowledge of these facts became generally known, I published the notice above cited to the natives of the Island.

To establish beyond doubt the assured efficacy of the practice I recommend would, I am aware, require more extended trials. But the encouraging results of those already

* Since writing the above, I have been informed that the cases vaccinated were 63 and not 59, with 17 deaths or 27 per cent. In the same number not vaccinated during the eruptive stage of the disease there were 25 deaths or 40 per cent nearly.

made, small though they be, seem to me to justify the applic-ation of the crucial test whenever opportunity offers.

I stated above that the lymph used was the ordinary vaccination lymph. It would, in my opinion, be an advantage to use special lymph, one of such a nature as would modify the disease to a certanity. A lymph of this kind could only be procured by passing the lymph of small-pox through the cow or calf, once or twice. This was done by a medical gentleman at Brighton with marked success. He inoculated a cow with the lymph of a small-pox patient, and with this lymph taken from the cow he vaccinated his own child. Several children at Brighton were vaccinated from the lymph of the Doctor's child. During an epidemic of small-pox at Brighton none of those so vaccinated took the small-pox. I would, therefore, request all who would put to trial the mode of dealing with small-pox as recommend-ed to use animal lymph obtained by passing the small-pox lymph twice through a cow or calf. The vaccin-ation may commence at any stage of the disease, or when fever has set in before the eruptions appear.

I may take this opportunity of offering another suggestion in respect to the suppression of small-pox. It is based on the practice followed by M. Pasteur in cases of bites from rabid animals, but whether the plan suggested will prove successful or not can only be decid-ed by trial and experiment. Whenever small-pox is introduced into any place, let a thorough search be made for all those persons who have been exposed to the contagion. And have them vaccinated and revaccinated until the period of incubation has expired. If by this means we can prevent those who have been exposed to the

contagion, from contracting the disease we have a ready means of stamping it out

The plan I propose is the following:—Take the number of days after exposure to the poison of small-pox.

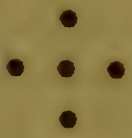
If one day, vaccinate once a day for three days, then every other day until the 13th day, and then every third day until the 20th day; after this we may be sure the disease will not appear, if it had not shown itself previously.

If *two days*, the same as above.

If *three days*, do do

After this daily vaccinations should be carried on according to the number of days that has expired after first exposure. The daily vaccination may after that be changed into every other day.

I would suggest the vaccination to be performed as it is done in Holland with five punctures, thus:—



## ELEPHANTIASIS.

A disease endemic in this Island, especially prevalent in the Southern and Western Provinces, is Elephantiasis of the extremities, and also of other parts of the body. I have given the subject a little consideration after the cause of the disease was found out by Dr. Manson of China, who attributes it to a filaria in the blood (Filaria Sanguinis Hominis). The manner in which the parasite enters the body is supposed to be by the sting of the

mosquito which carries it in its proboscis, or by impure drinking water. Dr. Manson's observations are worthy of attention, and I would recommend a careful perusal of his work by medical men in India and Ceylon where the disease is chiefly found.

Various means have been used to cope with this complaint; ligaturing the principal artery of the extremity affected, bandaging, strapping, and an endless variety of ointments containing Iodine, Mercury, &c. But all these were found of no avail. Dr. Manson's discovery suggested a different mode of treatment. I now saw that the right mode of subduing the disease would be by preventing the parasite increasing in number (Dr. Manson states that this it does with amazing rapidity), and ultimately destroying it altogether. My aim now was to discover such a substance. I experimented with Carbolic acid and Salycilic acid, but found they gave no good results. My thoughts next turned to Sulphurous acid, and knowing how easily this acid is decomposed, I resolved giving it in combination with Lime in the form of Sulphide of Calcium. I tried it first in the case of a young woman who came to me with recent inflammation of the leg, with considerable.swelling for the slight inflammation, and enlarged and painful glands on the groin. The woman was apparently not strong and was slightly strumous. I ordered one grain pills of the Sulphide of Calcium with an ointment for the groin of two grains of Iodoform with an cunce of Lard or Vaseline. To my great surprise the swelling subsided in less than three weeks, and when she called for some other ailment three months after, I could not say which was the swollen leg. She took for the first week one grain Sulphide

of Calcium pills twice a day, and after that two grain pills twice a day until the swelling subsided. This induced me to give the remedy a more extensive trial. Two lads about 17 years of age, who had the disease for several years, were put under a like treatment. One of them had his foot so swollen that he was obliged to have a shoe for it very much larger than the other. After having been under this treatment for about a year and a half, the swollen foot was almost the same size as the other. Several cases were treated in this manner by some of my medical friends—Mr. Thomasz amongst others, and the same results followed in their hands. At the present moment I have a man who had both his legs enlarged, one of them being nearly as large as his waist, and the other only a little smaller. The first sign he had of his leg reducing in size was that the hair on the inner side of it was growing, which was hitherto prevented by the constant friction of the swollen legs. It is now more than a year since he has been put under treatment, and at the present time his legs are nearly the size of his thighs. I am in hopes of seeing him quite recovered in a another year or so. The duration of the disease in this case is about 30 years in one leg, and about 20 years in the other. He is between 50 and 55 years old.

One of my reasons for prescribing the Sulphide of Calcium was that as parasites in the liver are destroyed by being calcified, so the same may be done in the glands where they obstruct the circulation and cause inflammation of the absorbents.

I would like to hear that this practice for Elephantiasis is tried in other countries where the disease is

common. The remedy should be persevered in for a lengthened period, and not given up until the disease subsides. It is necessary to suspend the use of the Sulphide of Calcium when it affects the stomach and causes irritation and to renew it after the irritating effects have subsided.

F. D. Anthonisz M.D.
Galle, Ceylon.
Aug/87.